AMENDMENTS TO THE CLAIMS

1. (Previously presented)A method of suppressing or inhibiting the immune response in a patient in need of such modulation, the method comprising administering to the patient an effective amount of a peptide selected from the group consisting of Ala-Glu-Asn-Lys-NH (AENK) and Lys-Asn-Asn-Glu-NH (KNNE).

2. (Original) A method according to Claim 1 wherein the patient has or is at risk of a disease which involves MHC Class II molecules.

3. (Previously presented)A method according to Claim 1 wherein the disease is an autoimmune disease.

4. (Original) A method according to Claim 3 wherein the disease is rheumatoid arthritis.

5-11 (Canceled)

12. (Currently amended) A method according to Claim 62 wherein the inhibitor has the structure B1-$(X)_n$-Asn-Q where B1 is any suitable N terminal blocking group; X is an amino acid residue; n is between 1 and 100, Asn is an asparagine residue and Q is a group capable of reacting with the active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.

13. (Previously presented) A method according to Claim 1 further comprising administering to the patient an effective amount of an agent for treatment or prevention or amelioration of an autoimmune disease or an allergic or hypersensitivity reaction.

14. (Previously presented) A method according to Claim 1 further comprising administering to the patient an effective amount of an immunosuppressive agent.

15. (Currently amended) A method of reducing the processing of a protein antigen by a MHC Class II molecule by a cell, the method comprising contacting the cell with an inhibitor of asparaginyl endopeptidase, wherein

the inhibitor of asparaginyl endopeptidase is a competitive inhibitor comprising a peptide selected from the group consisting of Ala-Glu-Asn-Lys-NH (AENK) and Lys-Asn-Asn-Glu-NH (KNNE); or

the inhibitor of asparaginyl endopeptidase is a non-competitive inhibitor of asparaginyl endopeptidase which comprises an asparagine residue to which is attached a

group capable of reacting with active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.

16. (Original) A method according to Claim 15 wherein the inhibitor is a competitive inhibitor.

17. (Canceled)

18. (Previously presented)A method according to Claim 16 wherein the peptide is N and C-terminal blocked.

19. (Previously presented)A method according to Claim 15 wherein the inhibitor is a non-competitive inhibitor.

20. (Currently amended) A method according to Claim 19 wherein the inhibitor has the structure B1-$(X)_n$-Asn-Q where B1 is any suitable N terminal blocking group; X is an amino acid residue; n is between 1 and 100, Asn is an asparagine residue and Q is a group capable of reacting with the active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.

21-37. (Canceled)

38. (Previously presented)A pharmaceutical composition comprising a competitive inhibitor of asparaginyl endopeptidase and a pharmaceutically acceptable carrier,

wherein the competitive inhibitor of asparaginyl endopeptidase comprises an N and C-terminal blocked peptide selected from the group consisting of Ala-Glu-Asn-Lys-NH (AENK) and Lys-Asn-Asn-Glu-NH (KNNE).

39. (Original) A pharmaceutical composition according to Claim 38 further comprising an agent which is usefully administered to a patient in need of modulation of the immune response.

40. (Previously presented)A pharmaceutical composition according to Claim 38 further comprising another agent for treatment or prevention or amelioration of an autoimmune disease.

41. (Original) A pharmaceutical composition according to Claim 38 further comprising an immunosuppressive agent.

42. (Previously presented)A pharmaceutical composition comprising the composition of Claim 52 and a pharmaceutically acceptable carrier.

43-51. (Cancelled)

52. (Currently amended) An inhibitor of asparaginyl endopeptidase which has the structure Bl-(X_aX_n)Asn-Q wherein B1 is any suitable N terminal blocking group; X_aX_n are the n amino acid residues immediately N terminal to an Asn cleavage site in the invariant chain of Class II MHC molecules; Asn is an asparagine residue; and Q is a group capable of reacting with the active site of asparaginyl endopeptidase and forming a covalent complex therewith.

53. (Previously presented) An inhibitor according to Claim 52 wherein the number of amino acid residues in (X_aX_n) is between 1 and 25.

54. (Original) An inhibitor according to Claim 53 which is any of Bl-Ser-Gln-Asn-Q; Bl-Leu-Glu-Asn-Q; Bl-Leu-Gln-Asn-Q; B1-Pro-Glu-Asn-Q; Bl-Leu-Lys-Asn-Q; Bl-Gln-Asn-Q; B1-Glu-Asn-Q; B1-Asp-Glu-Asn-Q; Bl-Asn-Gly-Asn-Q; B1-Phe-Pro-Asn-Q; B1-Val-Pro-Asn-Q; and Bl-His-His-Asn-Q.

55. (Canceled)

56. (Currently amended) A composition comprising an inhibitor of asparaginyl endopeptidase and an inhibitor of cathepsin S, wherein

the inhibitor of asparaginyl endopeptidase is a competitive inhibitor comprising peptide selected from the group consisting of Ala-Glu-Asn-Lys-NH (AENK) and Lys-Asn-Asn-Glu-NH (KNNE); or

the inhibitor of asparaginyl endopeptidase is a non-competitive inhibitor of asparaginyl endopeptidase which comprises an asparagine residue to which is attached a group capable of reacting with active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.

57. (Previously presented) A method according to Claim 1 wherein the patient has or is at risk of an allergic or hypersensitivity reaction.

58. (Previously presented) A method according to Claim 1 wherein the patient has undergone or is to undergo a transplant.

59. (Previously presented) A method according to Claim 58 wherein the material transplanted, or to be transplanted, has been contacted with an effective amount of the inhibitor of asparaginylendopeptidase.

60. (Previously presented) A method according to Claim 15 wherein the cell is, or is comprised in a tissue or organ, for transplantation into a patient.

61. (Previously presented) An inhibitor according to Claim 53 wherein the number of amino acid residues in (X_aX_n) is between 2 and 10.

62. (Currently amended) A method of suppressing or inhibiting the immune response in a patient in need of such modulation, the method comprising administering to the patient an effective amount of a non-competitive inhibitor of asparaginyl endopeptidase which comprises an asparagine-containing peptide and a group capable of reacting with the active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.

63. (Previously presented) A method according to Claim 62, wherein the patient has or is at risk of a disease which involves MHC Class II molecules.

64. (Previously presented) A method according to Claim 62, wherein the disease is an autoimmune disease.

65. (Previously presented) A method according to Claim 64 wherein the disease is rheumatoid arthritis.

66. (Previously presented) A method according to Claim 62 further comprising administering to the patient an effective amount of an agent for treatment or prevention or amelioration of an autoimmune disease or an allergic or hypersensitivity reaction.

67. (Previously presented) A method according to Claim 62 further comprising administering to the patient an effective amount of an immunosuppressive agent.

68. (Previously presented) A method according to Claim 1, wherein the peptide is N and C-terminal blocked.

69. (Currently amended) A pharmaceutical composition comprising a non-competitive inhibitor of asparaginyl endopeptidase which comprises an asparagine residue to which is attached a group capable of reacting with active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith, and a pharmaceutically acceptable carrier.

70. (Currently amended) A method of suppressing or inhibiting the immune response in a patient in need of such modulation, the method comprising administering to the patient an effective amount of a non-competitive inhibitor of asparaginyl endopeptidase which comprises an asparagine residue to which is attached a group capable of reacting with active site cysteine of asparaginyl endopeptidase and forming a covalent complex therewith.